

# KERAMIC STUDIO

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WE call attention to the prize conventional flower study by Miss Maud Mason, given with this number of KERAMIC STUDIO, in connection with the coming design competition. Of this study Mr. Froehlich said in the May number: "Of the conventional studies in color, Miss Mason easily carried the honors. Her sketch has that most *precious quality* known as individuality. What it is can hardly be expressed in words, as it is purely emotional. If for instance, four painters make a study of the same flower, we will have four interpretations; one may give us a color scheme, another a line motive, a third the largeness of simplicity, but each dominated by a personal quality. I find in the study of Miss Mason dignity and restraint; the shapes are not crowded with detail; the parts are so well related that one can take in the design at a glance." We trust that our workers will study this design carefully before sending in work for competition, they should find it exceedingly useful. The regulations for the competition will be found on the back cover of this magazine.

## REVIEW OF THE LEAGUE EXHIBITION

Mary Chase Perry

NOW that a little time has elapsed since the first showing of the work done by the members of the League during the past year, the exhibit may be regarded more impersonally as a whole. At first one is inclined to feel the attraction of individual pieces. With the advantage of a little perspective we can draw numerous lessons which should be of value and establish something of a precedent in similar exhibitions.

The little gallery at Taft & Belknaps proved the fittest setting and lent a dignity and self respect which has not always been achieved by "hand-painted dishes." The quiet tone of green in the background and shelf covering was unobtrusive, yet harmonized charmingly with the color decorations. There was no attempt at anything fussy or spectacular in the arrangement; the pieces were well placed so that they could be examined without the "congregation side" being turned to the wall.

It was a signal that the superfluously dainty showing is no longer acceptable and white frilly draperies are relegated to show cases and shop furnishings.

The mere demand for self-respecting accessories proves that we have left for ever the forget-me-not and daisy studded path which perchance led some of us into the china painting field, that we have outlived the instincts of a period of prettiness to enter upon the substance of a well considered craft.

That is one lesson and it is well worth pondering, especially in the centers through which this exhibition will pass in its itinerary. Let us bespeak for it in each place an appropriate setting.

Concerning the exhibition itself, as classified in the little catalogue, there is a greater showing in the comparative branch than in the educational. This shows one thing surely—that our workers are not dependent upon stimulants in the form of medals and honors.

The comparative class offered the opportunity for observation and comment upon specific treatment of certain shapes and merely for the benefit to be derived in this way, yet by far

the greater number of pieces were entered under this head. The vases are treated with every scheme of color from dark to light, yet with the deeper tones predominating and they hold their own better too. It seems less easy to make the more delicate conceptions feel at home; unless they have some especial strength of drawing or design, they seem to lack the weight which would keep them on a par with the ideas which are expressed more boldly.

The bowls are something of a novelty, in that their shape is not commonplace. A number grouped together proves very interesting in showing how utterly unlike the same shape appears under different treatment. It makes a good demonstration of the apparent change in dimensions, following the use of varying lines.

The opportunity for decoration inside, produced some interesting results in narrow bands at the top. The shape too, seemed to invite most pleasant arrangements of a conventional order, so that almost without exception, the results carry some form of a "pattern" either repeated or distributed in a formal manner. Those with borders are especially charming and are distinctly a growth of the original idea which inspired the form. The proportions are perfectly considered, and the decorations not at all as an embellishment, or an applied decoration, but as a part of a preconsidered plan for the whole.

While each motive shows plainly, the main feature is subordination to the general decorative effect, which it goes to make up. It retains the character without its being thrust upon one with crude realism. In the same way that a pear for instance, might be intolerable as a decoration if painted with all the veracity of nature, yet, if properly used as a theme or motive, the most delightful and appropriate designs can be evolved.

Conventional decoration is the main thing—that is another lesson.

The plates show much more uniformity than those of last year, suggesting that ideas in general concerning decorative principles are less divergent. This is one of the good educational results of an exhibition of this nature. Also, *note well*, for all there were no restrictions in this regard, the plates almost as a whole show conventional treatment. Why is it? Not because the decorators were obliged to follow certain lines; not because there is not still a latent love for the "picture," but because our good decorators, and those whose desire it is to be well classed, are waking up! They are recognizing not only the possibilities and limits, but also the appropriate application of their work. Without coercion they are finding themselves. Some of them have been a little ashamed of it, and a little slow to admit and demonstrate their conversion—but behold!

The borders are restful—and such a relief in suggesting a uniform service. Some of the most simple ones are the most pleasing, one or two being made up of a repeated unit, which in itself would seem almost inconsequent, but which assumes great interest and charming decorative character by repetition. Let this be another lesson.

As a whole, less lavish display of color is in evidence than heretofore—especially in combinations. Soft greys and browns in monochrome are used on one or two pieces with the happiest results, indicating that if the design is good and well adapted, it does not demand numerous colors or great embellishment of gold to carry it out.

Regarding the educational portion of the exhibit, although the contributions are not as generous, yet what is shown is extremely good. Each class is well represented by thoughtful work in its special line. The "Outlines for a pitcher" show some which are graceful and practical, in that they would "pour well"—this is the first question a manufacturer asks in regard to a proposed shape and it is as well to make a sensible demand of the kind at the outset. The handles too, are a point which has needed much attention in order to make them less ornate and at the same time give a good "grasp."

The candlestick problem received considerable attention, and for a first attempt in the line of clay work, some very praiseworthy efforts are shown. In point of form, these are extremely interesting aside from any further attractiveness added by glaze. In fact those which have no glaze at all, but were fired to a mellow red or yellow are very effective, not only as examples of ceramics but even more as results of a study of form. One cannot help having more feeling and understanding of form, after having built up the shape with clay. It forces one back to foundation principles with most beneficial results.

The designs for tiles are so varied that they can not fail

to attract attention and may seem even startling, especially in places where the technical processes are little known. They give excellent opportunity for practice of precepts in modern teaching of design. Possibly some of our decorators who have not yet "arrived" will view them with disdain and think their reproduction not worth while—but let them see them a second time and a third, if necessary, they will happily discover their reason for being. It will be seen that most of them illustrate a point or principle in design, such as opposition or subordination. Looked upon from this point of view, and not merely from a standpoint of prettiness, they will bear much study which will show fruit later on. Then too, all of these classes in the educational branch indicate the process of procedure, and show the manner in which such designs are carried out so as to be acceptable to the manufacturer. In other words they show the amateur "how it is done," and the proper manner in which to express latent ideas.

The object of such a line of work was the pursuit of a study course, not alone to make things, but far more important to broaden one's conceptions and raise the understanding and *appreciation* of whatever is really good.



SWAMP DOGWOOD DESIGN—CORA STRATTON

SWAMP Dogwood is a white flower. After getting a correct drawing lay in the background with Copenhagen Blue, Baby blue shading into Carnation and Primrose Yellow. Leaves are a light green, use Yellow Green, Brown and Shading

Green. Shade the flowers with a gray made by mixing Baby Blue and Carnation.

For centers use Yellow Brown and Yellow as in wild roses.



## CLAY IN THE STUDIO

(Tenth Paper.)

Charles F. Binns



HE critical period has now arrived when the clay is to pass through the ordeal of fire, to perish or to persist. Before entering upon the details concerning kilns and their use a few general observations upon fire and its application to pottery will be necessary. The following paragraphs should be well studied and thoroughly mastered for it is only by an intelligent understanding of the principles which govern the action of fire that one can hope to reach success.

The heat of fire is produced by the phenomenon of combustion which is a chemical union taking place between fuel and the oxygen of the air. The composition of fuels need not concern us here except to state that they contain carbon and hydrogen in varying proportions. Carbon under ordinary conditions is a solid. In its pure state charcoal and plumbago (erroneously called black lead) may be cited as examples. If a fragment of charcoal be heated to redness and supplied with a current of air it will glow and burn away. It has combined with the oxygen of the air and has passed into a colorless gas known as carbonic acid gas or carbon dioxide. If the supply of air has been deficient a second colorless gas may have been formed. This is called carbonic oxide or carbon monoxide and it contains only half as much oxygen as the first named gas.

Hydrogen is a gas, though it exists in combination with carbon as a solid or as an oil. Both pure and combined thus it is inflammable and forms a very important constituent of fuels. Burned in a current of air hydrogen forms water vapor but if the air supply be deficient it refuses to burn, retaining its form as a gas. In burning gas the constituent parts are in such a form as to take fire readily but both liquid and solid fuels must be so heated as to become gaseous before they will burn. Thus while we usually speak of burning coal or oil it is really the gas which is evolved from these substances by heat which actually burns. In elementary text books of science there are given many pretty and interesting experiments to prove the truth of these assertions. We have not space to deal with the matter at further length. The point upon which these facts bear is the condition of the atmosphere inside the kiln upon which all successful burning depends.

It will be seen from the above statements that the supply of air to the fuel is of the first importance. A heated chamber may contain gases which are characterised according to their chemical composition by one of the following terms:

1. Oxydising; 2. Neutral; 3. Reducing. The first term almost explains itself. It means that there is more oxygen present than the fuel actually needs for perfect combustion, or in other words, that more air has been admitted than was necessary. Generally speaking this does no harm except for the loss of heat occasioned by a rush of cold air. The oxydising gases are the simplest to manipulate and give as a rule the best results. The meaning of the term oxydising is that the atmosphere is ready to supply oxygen and therefore to oxydise any substance which may come within its power. This is not an objectional feature because almost all colors and glazes are already oxydised, they have all the oxygen they need and can take no more.

The term "neutral" is likewise easily understood. This condition also would be harmless but is extremely difficult to regulate. In fact in an ordinary burn one cannot be sure of a

neutral atmosphere and therefore it is best to work for oxydising conditions.

The expression "reducing" needs some explanation partly because the word has often been wrongly used and partly because the effect of a reducing fire is usually disastrous. The word "reducing" in this connection has nothing to do with temperature, nor with the rise or fall of the fire. It does not mean "decreasing." It has to do with the chemical nature of the kiln atmosphere and is the opposite of oxydising.

If combustion be allowed to take place with a shortage of air the gases produced consist in part of carbonic oxide and hydrogen. Both these have a strong appetite for oxygen and if they cannot draw it from the air they will rob the glaze, the colors and even the body of the pottery. None of these has any more oxygen than it needs and yet they are forced to part with it to the hungry gases. In doing this they are "reduced" from higher to lower oxides and hence the action is called reducing.

A simple illustration will help the student to understand the action. Iron oxide exists in several forms. One of these, the common red oxide, has two parts of iron to three of oxygen, another, the black oxide, has equal parts of iron and oxygen. The parts referred to are not calculated by weight but by atoms, iron weighing 56 and oxygen 16. Now if the red oxide of iron be heated in a reducing gas it loses one of the parts of oxygen and turns black, being reduced to the black oxide. If the action be reversed and the black oxide be heated in an oxydising gas it absorbs oxygen and turns red.

Most of the substances used in pottery are capable of losing oxygen and hence the reducing fire is objectionable.

Hard porcelain is purposely burned in a reducing atmosphere but we are not now dealing with hard porcelain though this may come later.

The conclusion to be drawn from the foregoing explanations is that, in firing, care must be taken to secure perfect combustion. A good draft and a plentiful admission of air are indispensable.

Kilns are of two types, the open kiln and the muffle. In the former the flames pass through the firing chamber and the ware is usually protected by saggars; kilns used in most potteries are of this type. In the muffle the flames pass around and over the chamber but not through it. There the ware is heated by radiation from the walls. Kilns used for overglaze painting belong to this class and also the large kilns used by makers of enameled bath tubs.

The Caulkins kilns are muffles and many of them are doing good work. For portable studio kilns there are no better to be bought. They have their faults—no kiln that was ever built has none—the capacity is small, a trouble inseparable from a portable kiln and they need a very powerful draft.

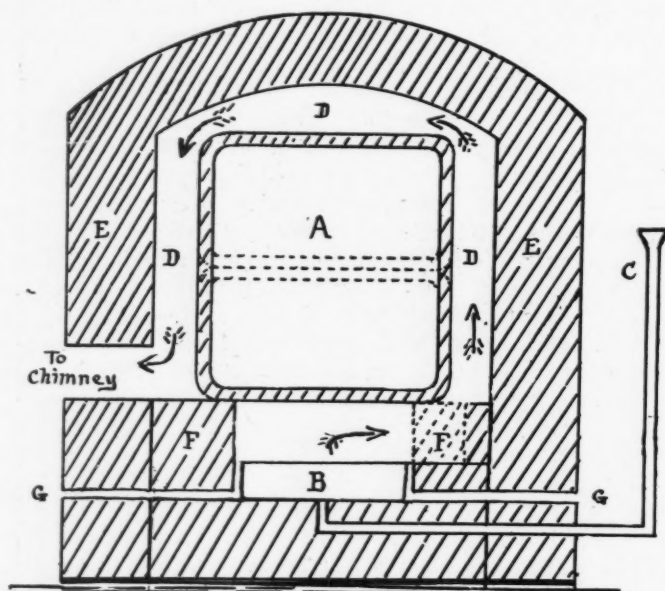
In the matter of inexpensive masonry kilns a state of evolution exists. Many have been erected and torn down, but little by little improvements are being made. The simple description of such a kiln and the rough sketch here given may aid some experimenters but local conditions vary so greatly that one must be prepared to deviate from the lines laid down.

The kiln is of the muffle type. The firing chamber consists of a length of flue lining which can be procured through a hardware dealer. It is made of earthenware and has walls about one inch in thickness. A length should be procured of which the section is as nearly square as possible or, two lengths may be laid one on the other as indicated by the dotted lines. If this be done it must be remembered that the upper chamber will be somewhat hotter than the lower. One end of the flue lining is filled up with fire brick set in clay. The front is left open but bricks are prepared so as to close it in the same way when firing. Only in this case the bricks are set together dry and the front is

smeared with damp sand so as to completely fill the openings.

The flue lining which we will now call the muffle A is set upon two piers of fire brick F F. The left hand pier is solid, the right hand, in the part shown by the dotted lines, is spaced out, brick from brick, so as to allow the flames to pass. These take the course shown by the arrows, passing over the muffle and down the other side, being impelled by the draft of the chimney. The chimney may consist of ordinary iron stove pipe or of terra cotta flue lining. It should be not less than ten feet high and secured by iron stays.

In the foundation of the kiln three passages are shown, one through which the oil pipe C passes to the burner B, the others, marked G, are air passages leading to the burner. Of these there should be at least four on each side. There should also be openings both back and front for the admission of air to the burner. The burner B is a shallow iron trough which runs the whole length of the muffle. The oil is supplied by the pipe C which is arranged so that the oil from a suitable vessel may flow into the open end. Thus the stream of oil, being in sight, can be easily regulated.



The opening in front of the burner must be filled with loose bricks so that lighting and observation may be easy. The outer walls and arch of the kiln are built of fire brick. The joints on the inner side should be filled with fire clay, on the outer side with mortar, or, better still, a second wall of red brick laid in mortar may be built outside the fire brick. This will secure a permanent job.

These walls need not be torn down if the muffle breaks but a new muffle can be set in from the front.

In order to start the fire a gentle stream of oil is allowed to run and a wisp of asbestos set in the burner will allow the oil to be lit. As the heat rises more oil is supplied and the air holes kept clear.

The degree of heat depends mainly upon two things, the width of the flues D D, and the height of the chimney. The flues should not be more than two inches wide, this will assist radiation from the walls and quicken the firing. The chimney supplies the draft and there must be plenty of this to secure a good current of air and to prevent reduction.

With regard to the duration of the firing no comparison can be made with the overglaze kilns which fire in about one hour. Pottery needs a long, soaking fire and must be given plenty of time. This kiln ought to give good satisfaction in

about four hours but if it runs to six or even eight hours the results will be better. It will be necessary also to attain a higher temperature if a shorter burn is made. For the work described in these papers Cone 1 is enough but Cone 1 in a larger kiln will mean Cone 2 in a small muffle if the same results are to be had. It is, in fact, almost impossible to lay down rules for any kiln, kilns have individual characteristics and must be governed accordingly.

There is no part of the profession of a clay-worker which tries the patience and the temper more than kiln work. Perhaps this is the reason why clay-workers have usually a good share of the philosophy of the Cabbage Patch. They have met and overcome so many troubles that they are no longer easily moved. The sooner our studio workers reach this stage of development the better for them and for their art.

#### A NEW POTTERY SCHOOL.

Mr. Edwin A. Barber, Curator of the Pennsylvania Museum, Philadelphia, writes to us that a Pottery School will be added to the Art and Textile Schools connected with the Museum, which number now about 1000 pupils. He wishes to find a competent and practical teacher of pottery work to take charge of the new department.

#### TREATMENT FOR TEA TRAY IN CHINA—(Page 93)

*Henrietta Barclay Paist*

DRESDEN Yellow Ochre and Chocolate or Dark Brown are the two colors needed to carry on this design. Lay in the flesh tones with a thin wash of Yellow Ochre and the background with a deeper tint of the same color. The hair and outline, teapots, etc., in the Dark Brown. The letters on background and teapots on border may be done in gold and give a very pleasing effect with the Cream and Brown. Or the letters may be in Brown and the border in Cream. In case of the letters being in gold they should be outlined or accented with Brown.

#### STUDIO NOTES

Mr. F. B. Aulich has opened his studio for summer and fall classes. He has on view some new studies of wild flowers painted during his recent trip through North Carolina.

Miss Mabel C. Dibble is spending the summer in South Haven, Mich., and will not reopen her Chicago studio before October 1st.

Mrs. Sarah Wood Safford will teach in Springfield, Mass., during the latter part of September, opening her New York studio the 1st of October.

Miss M. Louise Cowen of Toronto, Canada, is spending the summer on the Pacific Coast. She will open a class in Vancouver, B. C. in September, and will return to Toronto in October.

#### WILD CRABAPPLE BLOSSOMS

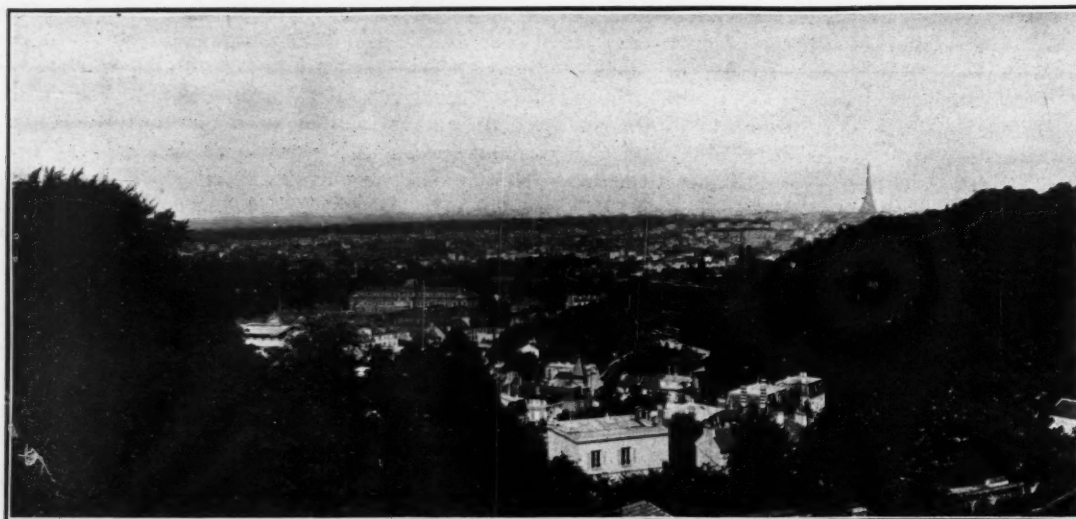
*Nina Lombard*

SKETCH the design with care, preserving the knotted stems which are characteristic of the Wild apple branch. Make a soft background of delicate grey green, using Apple Green, Rose and Copenhagen Blue; wipe blossoms out, keeping edges soft. Shade with grey for flowers and add a thin wash of Rose, deepening on the edges, where the blossom is most pink; keep the leaves in cool greens, using Apple, Moss, Royal and a little Yellow Brown. Stems, Finishing Brown. Centres, Yellow with Yellow Brown accents. Give the design two workings, accenting and modelling in second fire.





WILD CRABAPPLE BLOSSOMS—NINA LUMBARD



View of Paris from the hills of Sèvres, showing the National Manufactory.

### GRAND FEU CERAMICS

#### III. THE MANUFACTORY OF SEVRES—ITS ORGANIZATION

*Taxile Doat*



HE Manufactory of Sèvres has for more than a century shone with a matchless brilliancy. No factory equals its renown, no productions have exceeded the sum of its artistic wares. The glory of its name can only be compared to that of the most illustrious ceramic agglomerations of the world, whether called Athenian Pottery, Etruscan Ceramics, Hispano-Moresques, Italian Faïences, King-te-tchin, Hizen, Oiron, Rouen, Meissen or Delft. And, although most of these names sum up the efforts of numberless factories, grouped in one locality, none of these groups has achieved the splendor of the isolated Sèvres.

This splendor is due to its powerful organization, from artistic, scientific and financial standpoints.

Since its creation under Louis XV in 1753, Sèvres has received annually royal or national subsidies, which have increased in proportion to its development, its productions, and also to the vanity or generosity of monarchs. Originally, under Louis XV, its subsidy was 96,000 livres. It was increased to 100,000 livres under Louis XVI. The Revolution had to adjust its protection to the disturbed finances of the time, but under Napoleon I, Sèvres received from the civil list 264,000

francs; under Louis Phillipe 300,000 francs, and Napoleon III gave it 350,000 francs from his privy purse, besides the variable subsidies made necessary by Expositions or by extraordinary undertakings.

After the terrible year 1870-71, the Manufactory became part of the Public Services, and received from the National Budget an annual subsidy of 500,000 francs, raised to 624,000 francs in 1880 and 652,000 francs in 1903.

This allowance is gradually paid out by the Minister of Finances, according to needs. It covers the expenses of the three departments, administrative, artistic, technical, at the head of which are, since 1891, an administrator and two directors (artistic and technical), thus forming a triumvirate of direction. Before that time there was only one head, one administrator-director.

The general personnel consists of 175 people, but the number of collaborators is unlimited, every Frenchman having the right to submit designs and models which may be accepted by the triumvirate.

The administrative department is composed of the administrator, the two directors, the museum, the library, clerks and guards. Salaries vary from 1,200 to 12,000 francs. Besides their fixed salaries the members of this department have free lodgings, heat and light, and a pension when 60 years of age and after 30 years of service. Extra pay is also given to high members of the staff and the guards receive free clothing. All these advantages stimulate the devotion to the common work. The department is under the direct orders of the Administrator, who is named by Presidential decree.

The artistic department is managed by the Director of the



Old manufactory of Sèvres, built under Louis XVI, now High School for girls.



New manufactory of Sèvres, built under Napoleon III, inaugurated in 1875.



Works of Art, who is selected by the Minister of Beaux Arts and assumes the responsibility of artistic productions. He determines the prices of executed pieces, buys the plans of decoration, designs, statuettes and all works which he considers beautiful and useful for the diffusion of ceramic art or the good renown of the factory.

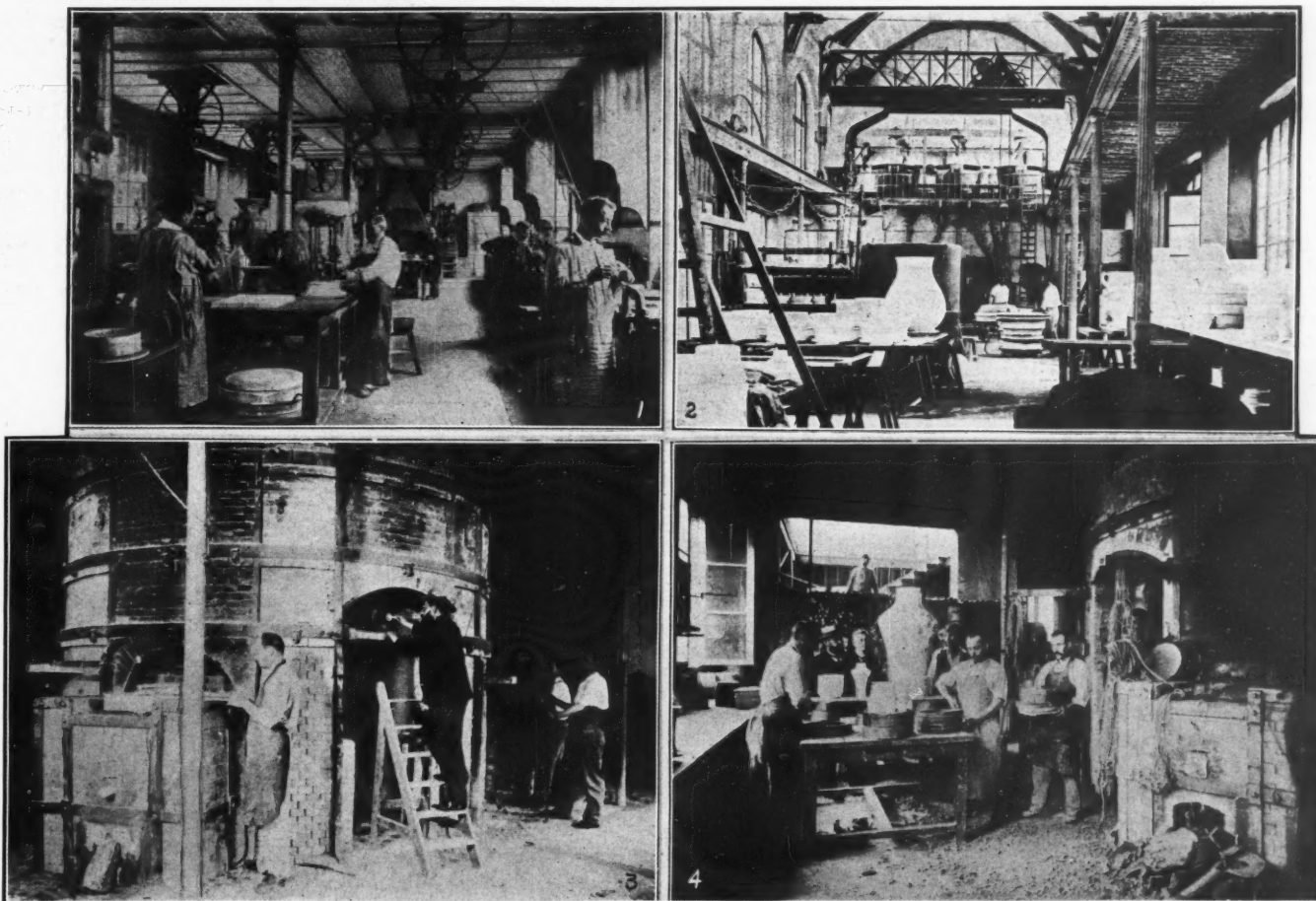
In order to determine the sale price of a piece, the sum paid to the artist is doubled, so as to cover the general expenses; so a vase for which the artist receives 500 francs will be sold for 1000 francs, and only in cases of exceptionally successful pieces is the sale price increased in a larger proportion. Every executed piece is paid for to the artist, whether it comes out of the kilns successful, insignificant or broken.

Vases, the decoration of which is made with the brush, remain unique pieces, whatever their cost; only pieces made with the chisel are reproduced or edited.

from the artists of the factory, and the statuettes which were to be executed in biscuit brought to the author only the purchase price. In order to extend and renovate the production and to attract more talent the purchase of designs outside of the factory was adopted for the Exposition of 1900 and maintained since; also the allowance of 25 per cent editing fees for all works of statuary reproduced in biscuit. As a result, the creative activity which was before confined to the factory, now comes from the outside, but to this invasion is due the magnificent display of the Exposition Universelle of 1900.

Only the fixed and permanent personnel execute their own works in the factory. Occasional collaborators are not admitted in the factory to which they do not belong, and their models, if accepted by the triumvirate of directors, are executed by others in the working rooms.

The third department, which in point of numbers, is the



1. Working room for mounting. 2. Working room for large casting. 3. Watching the firing. 4. Unpacking a kiln.

The fixed artistic personnel has at all times constituted a brilliant phalanx, united and glorious, which has left imperishable creations or reproductions. But this phalanx, which has at times reached the number of 50, has gradually decreased and includes now only 24 decorators, and hardly a dozen are designers, the others being technical virtuosi, clever to interpret.

The artists engaged before 1880 are entitled to a retreat annuity, but this privilege having been suppressed after that date, artists now only enjoy monthly salaries, to which are added at the end of the year allowances for supplementary work. These are irregular but justified by the moderate salaries. With these additions salaries vary from 2,400 francs to 6,000 francs.

Until 1895 nine-tenths of the decorative projects came

most important, includes the laboratory, the kilns, the mill and all the working part. It is managed by the technical director, who is and has always been a distinguished chemist, and who has the help of another chemist, chief of the laboratory.

It is in this laboratory that are mixed the colors, pastes and glazes, and in it constant researches are made for new discoveries. It is there that scientific reason takes the place of empiricism.

From this laboratory have come all the great ceramic discoveries of the century. There, were studied and determined the formulae of the *pâte tendre*, the hard porcelain, the new porcelain, the *grès cérame*. There, were created the magnificent palette of the painters, the colored *pâtes*, the *pâtes-sur-pâtes*, the colored glazes, the flammé reds of copper, the crystal-

line glazes and quite recently the mat glazes, the under glazes, and the colors of grand feu over glaze. In this laboratory has been invented the process of casting large vases and has been determined the regulation of oxidizing and reducing fires. There the coloring oxides are scrupulously analysed to insure their purity, and all materials are carefully examined before being used.

The different monarchs have in different ways manifested their interest in the Sèvres Works. Louis XVI liked to converse with Macquer. Napoleon I gave an order to Brongniart for the table of the Marshals, and this same Brongniart, who was for forty years at the head of the factory, created, according to the wishes of Queen Marie Amelie, a marvelously rich and fresh painting palette.

Napoleon III who said "thou" to the learned Regnault, sent to China frequent missions with a view to enrich the Sèvres Museum with the most characteristic specimens of the Oriental art, and the laboratory with the materials and colors taken from the Chinese potteries by diplomacy, and sometimes by force (Mission Scherzer.)

Like the artists, the workmen were only until 1880 entitled to a retreat annuity. Recruited among the best men of the ceramic industry and also among the best pupils formed in the working rooms, these artisans are exceedingly clever. The care with which they do the glazing, the packing of the kilns and the firing has considerably reduced the percentage of losses which is unavoidable in all ceramic fabrication, especially of porcelain, and their work is an important factor in the beauty of the Sèvres products.

There are seven kilns of different sizes. The moulders, repairers of biscuit, number 22, with salaries varying from 2,800 to 4,500 francs, and there are 15 throwers with salaries varying from 2,000 to 4,600 francs.

Outside of the table services made from models of the factory, Sèvres accepts no orders. All the new models are due to the chief of the Works of Art, or to the imaginative creations of the artists. Under the monarchs, no piece was sold; all belonged to the kings, who gave them to friendly princes, to diplomats, high dignitaries, charitable institutions or to the Palaces of the Crown.

Everything has been changed since the Sèvres budget is voted by the Parliament (1870). Although a few pieces are

still offered as diplomatic presents, most of them go to the French Museums, and the others are offered for sale in a sales-room specially arranged in the factory itself. But until now, in order not to injure the outside ceramic artists or factories, the Parliament had forbidden the sale in public exhibitions or the creation in Paris of a store for the sale of the products. In 1900, on a ministerial order, a successful exception was made to this rule, and at present the factory, overruling all precedents, has on the 1st of May, 1903, opened a store on the Boulevards in Paris.

Moreover, in place of the jealous hiding of the discoveries made in the laboratory, which was characteristic of the administration under the monarchy, the present democratic government is giving out every ten years all the new processes, and in order to efficiently support the efforts of the French ceramic industry, the Minister of Public Instruction has recently annexed to the factory a School of Ceramics, where industrial superintendents are formed, and where after four years devoted both to practice and theory pupils receive the diploma of the School of Sèvres.

If one brings into comparison the situation of the other royal establishments of Europe which have only a nominal protection, like Rosenberg, Meissen, Minton, or a small subsidy, like Berlin (80,000 marks), Copenhagen, St. Petersburg, one will easily understand why with its model organization, its large subsidy which allows the purchase of the creations of great artists, free, unlike other State factories, from all preoccupations of a commercial nature, established formerly in a palace built by Louis XVI on the edge of the woods of St. Cloud and Versailles, later on in a more modern palace due to a caprice of Napoleon III, having the prestige of a State factory and a personnel of eminent artists and artisans unhampered by the cares of material life and with an absolute freedom of presence or absence, one, I say, will easily understand why Sèvres has been this marvelous *ensemble* which for over 100 years has forced a universal admiration

(TO BE CONTINUED)



Pâte tendre—  
Vase by Mr. Vignol.



Diana's Game Bag—Hard porcelain, medium  
size vase, pâte sur pâte, by Taxile Doat.



Minerva's Lace—Hard porcelain, pâte  
sur pâte, by Taxile Doat.



Laurel—Medium size vase,  
by Taxile Doat.



## CATAWBA TREE

*Adelaide A. Robineau*

ONE of the showiest and earliest trees to blossom is the Catawba tree. The flowers two or three inches across are in conspicuous spikes resembling in general effect the horse chestnut, but the flower itself is quite different. It is of a creamy white with markings in reddish purple toward the centre, from which two yellow streaks spread on to the lower part of the corolla.

The scale like calyx is green streaked with purple so as to look almost brown. The anthers and pistils are yellow and purple, the odor, similar to that of an orchid. The leaves grow in a whirl about the flower cluster, usually ten to thirteen varying from three inches to sometimes ten inches in length and to seven in width.

The flower itself is very graceful and decorative, and lends itself to almost any style of treatment. The details of flower, pistil, stamens, etc., will suggest many simpler and more conventional designs for smaller pieces.

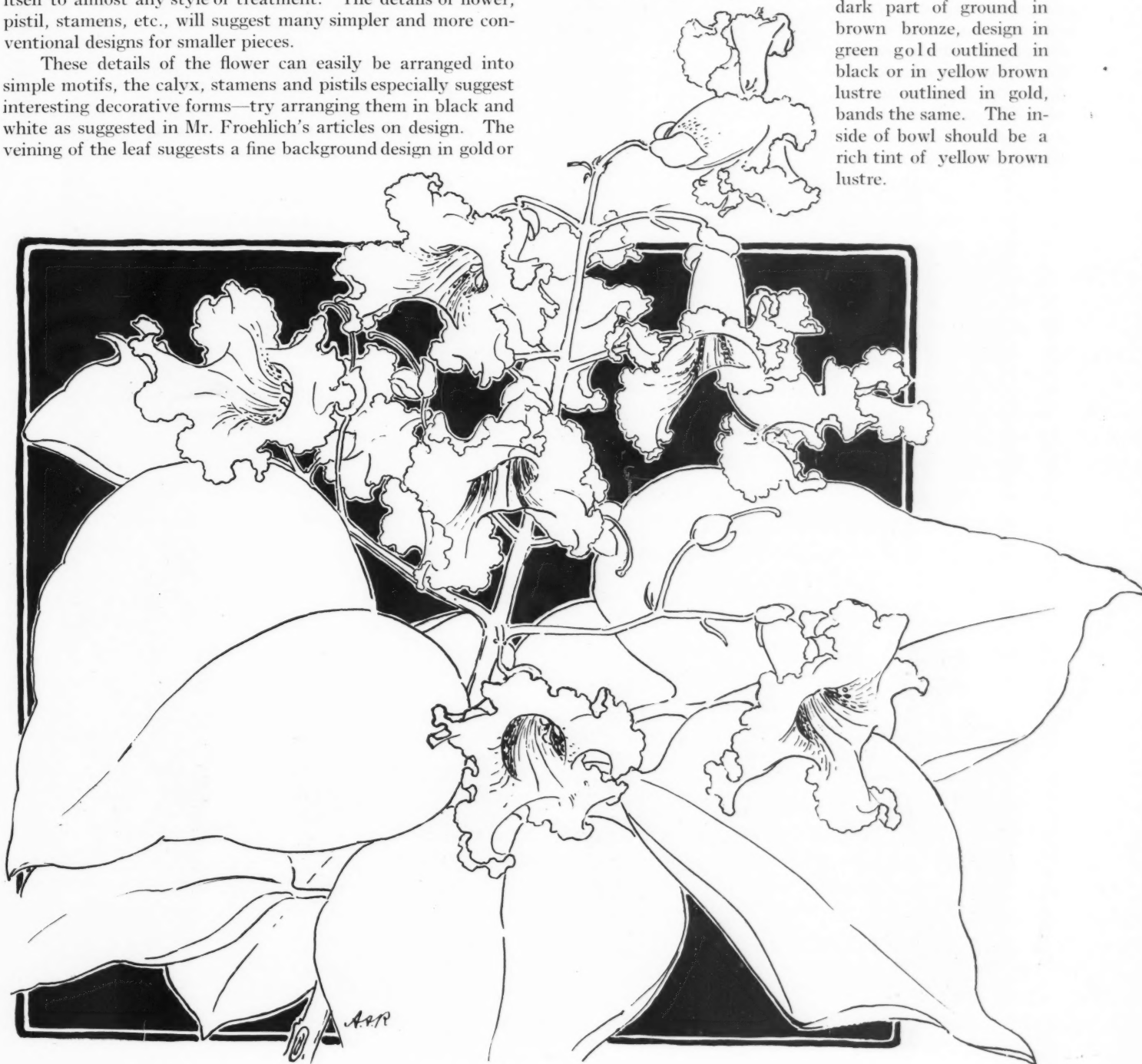
These details of the flower can easily be arranged into simple motifs, the calyx, stamens and pistils especially suggest interesting decorative forms—try arranging them in black and white as suggested in Mr. Froehlich's articles on design. The veining of the leaf suggests a fine background design in gold or

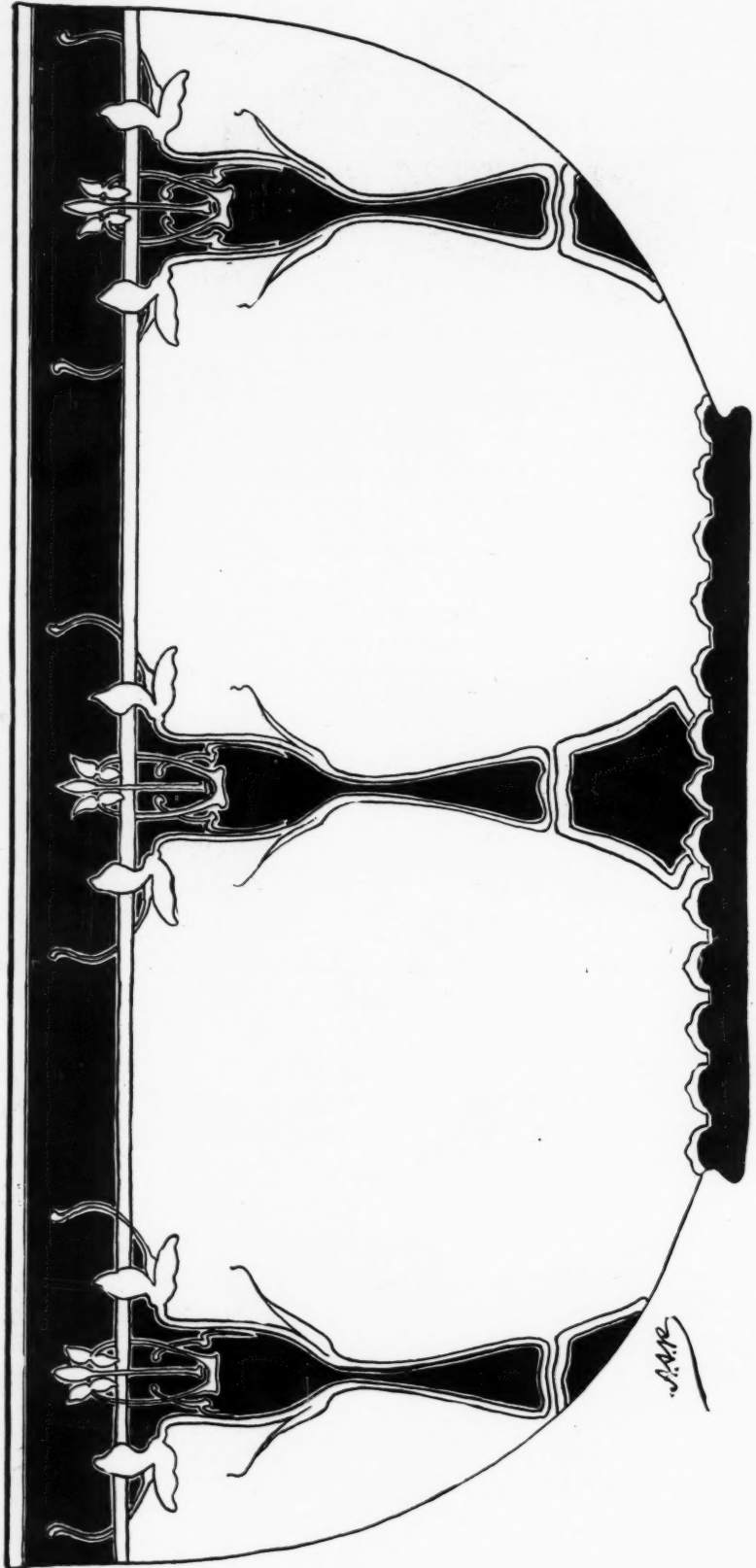
color, as do also the odd markings of the corolla and the peculiar spotting on the branch where the old leaves have fallen off. The centre arrangement of stamens and pistils with the flattened circle about it, shown in the detail drawing, makes an excellent form to use in a simple conventional border in monochrome, and the calyx from every point of view is interesting.

We give here two arrangements for salad bowls.

In using the first border the outside ground of bowl should be left white, bands should be gold outlined in black, light space between upper bands, also flower design, a pale cream tint with green gold outlines and green gold wavy lines in background, two bands behind rows of dots to be deeper yellow spots and marking should be in gold. Inside of bowl may be tinted apple green or cream with band of gold, one-eighth of an inch wide, about a quarter of an inch from rim, outline this band in black.

For the second design tint the outside with a cream ground, dark part of ground in brown bronze, design in green gold outlined in black or in yellow brown lustre outlined in gold, bands the same. The inside of bowl should be a rich tint of yellow brown lustre.





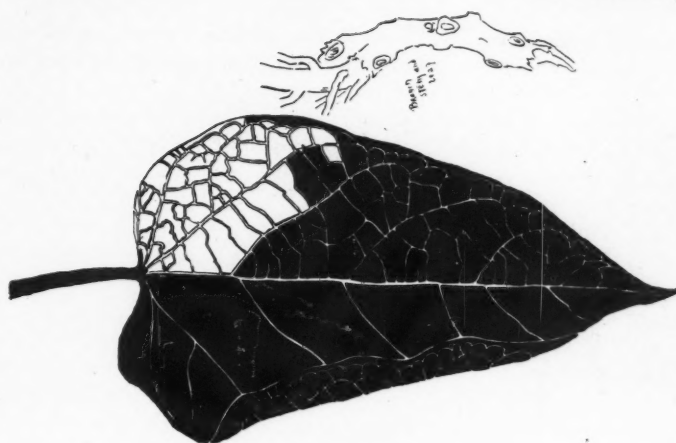
CATAWBA BLOSSOM DESIGN FOR BOWL—ADELAIDE ALSOP ROBINEAU



VASE

*Frederick H. Rhead*

GROUND the sky of the vase with pale blue, and from horizon to the base with a light warm green. Paint the circular masses of the sky in pale Heliotrope and the mass behind the trees in Lemon Yellow. The band round the base of the vase in pale Blue and the ground in wide band in Dark Green,



Leaf and Blossom of Catawba Tree



also paint the trees in dark Green, the footpath in Citron yellow, French Brown and Green, use white in the yellow for the flowers also in the light green for the leaves, the grass blades in a darker green than the ground, the neck and base of the vase to be finished in light purple and greenish greys. The inscription, "The Buttercups, the little children's dower" (Browning), may be used in place of the black band at base.

## PRINCIPLES OF DESIGN

(Fourth Article.)

Hugo Froehlich



IN the July number the principle of dark and light, or in other terms, values, was taken up, and that phase known as "two tones" partly considered. Because of the importance of two tones in the crafts, it was thought best to continue a few exercises in that direction. For instance: the Delft, Canton and Dedham wares are illustrations of two tones of blue. A large part of magazine and newspaper work depends on this same principle. Even illustrated books such as the Evening Bell series (see example Fig. 1); Will Bradley's "Beauty and the Beast" (see example Fig. 11); "Child's Garden of Verse," by Robert Louis Stevenson, owe much of their charm to the manner in which black and white have been managed in their illustrations. Often rugs, carpets, wall paper, baskets and printed goods such as calicoes depend on the same principle.

The limitations are severe, but the very simplicity thus forced, tends toward excellence. This is important as the general inclination is to overdo, to combine too many elements in one design. *A sure sign of decadence is over ornamentation.*

It is easy to say keep the work simple, but very difficult to do it. All splendid examples of good art seem to have



Fig - 1

required no effort at all. They are so simple that one wonders why they could not be produced at one sitting. This elimination of superfluities requires the hardest kind of work and thought. The apparent absence of effort is a sure sign of its presence.

In the following lessons such problems have been selected as will force the thought in the direction of simplicity. Make simplicity a habit, just as has been suggested to make line quality found in flowers a habit. Both habits can be acquired by systematic exercise.

Problem I—Tile, four inches square, two tones of one color or simply black and white. If two tones of one color are used, mix ivory black with permanent blue in a small saucer. The black is added to modify the harshness of the blue. It need hardly be said that to make a faint wash more water is added to the color, while a strong wash or tone requires very little water.

Make three designs for tiles.

In first tile use facts taken from nature forms (see June number KERAMIC STUDIO, pages 41 and 40, Prob. I), or use a conventional treatment as in Fig. III.

Second tile, find some historic style such as Greek, Persian, Romanesque, or any of the others will do. Adapt them to the conditions of a tile. Write under the design the name of the style used as in Fig. IV.



Fig II

Third tile to be based on straight line motive, Fig. v. Note that the principle in these three examples is that of two sided symmetry in Fig. III, and four sided symmetry in Figs. IV and v.

In the first, our own inventions based on nature forms are used. In the second, the motive has been borrowed from some style and adapted to a tile. This is largely the method adopted by designers having little inventive powers. It is introduced here that we may learn something of the beauty of historic styles and at the same time see that they are founded on the principles of composition which we are considering.

The third tile or straight line is purely imaginative. It is an exercise in proportion and direction of areas. In these designs we have employed the three sources from which motives originate, namely: nature, historic ornament and imagination.

In planning the design, it is the breaking up of some given bounded shape like a square or rectangle that we seek, by means of straight or curved lines. And in this process we must think of such areas and such lines as are beautiful in themselves and related to their neighbors. This being related to their neighbors is a perplexing question. In Fig. IV tile based on the Byzantine the lines marked xx, oo, ss, have consistency,



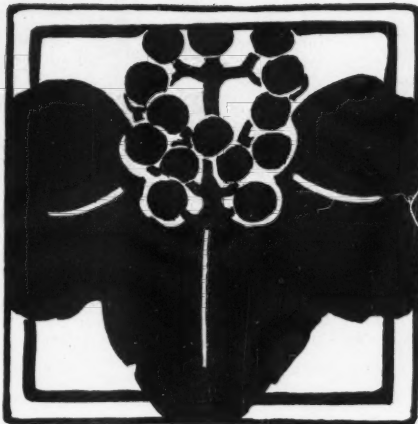


Fig III



Fig IV Byzantine.

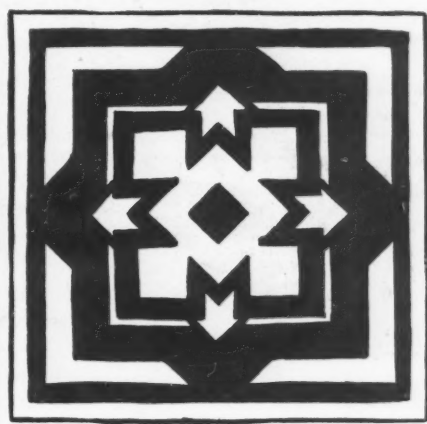


Fig V

viz: if the lines or edges were extended they would drop into the direction of the other marked with same letter, thereby producing harmony of movement.

This movement or consistency is of utmost importance in every work of art and is readily understood by the successful artist and designer, but to the student it is a matter of searching. Let us test its existence by considering Millet's "Potato Planting" Fig. VI. The main shapes, the man and woman are finely placed on the canvas. The man just a little to the left of the center, the woman much farther to the right. The action of the two unites in the process of planting. This point is again near the center of the canvas. Then see how the main line of the picture circles about this point, beginning at the heel of the man's left foot, passing over his back and hat across the intervening space to the woman's head, down her figure and ending where her left foot touches the ground. How big and sweeping

the movement is. Throughout its length it expresses truth of form but ignores all detail. It models the forms stronger and more truthful than a camera could do it, because in its severity it can consider only the essentials that make a figure. The shape of the tree repeats with slight variation this movement. The horizontal lines of the distance and foreground are a play on the horizontal edge of the canvas, while the vertical movement is expressed in the lines of the man's legs, tree trunk and edges of woman's dress. This delightful play of one line into some answering line can hardly be expressed in words any more than a harmony of sounds can be described. It must be felt. Once the judgment can discern this related quality, it gives the mind increased power of enjoyment. In every design look to it that the parts seem to flow one into the other and that the structural lines of the object control to some extent this action. Wherever a small projection can be lopped off so as to make the



FIG. VI—MILLET'S "POTATO PLANTING."



Fig VII



Fig VIII



Fig IX

movement simpler and larger, do so, providing its elimination does not violate truthful drawing.

In the tiles lay a faint wash of permanent blue and ivory black over entire four inch square. Wait until dry, then with much stronger color paint in some of the shapes, striving for a balance between the quantities of light and dark shapes. In this matter of balance no hard and fast rule can be made. In a general way it might be stated that one must not dominate the other to any great extent. There ought to be main masses of light and main masses of dark, secondary masses of both.

Problem II. Cup and Saucer—In this as in the preceding, use two tones either solid black on white or a dark grey blue on a light grey blue. Keep the cup and saucer shape very simple. Do not break any structural lines. So often the rim of a saucer or plate is one string of wriggles. The same is true of the handles.

First cup—Arrange a border in straight line motive, Fig. VII. This comes under linear repetition. Study width of border so as to make good proportion with width of undecorated part. Do not use motive too large as that would overbalance size of cup. On the other hand guard against the use of too many small ones.

Second cup or saucer—Use some motive from nature as Fig. VIII.

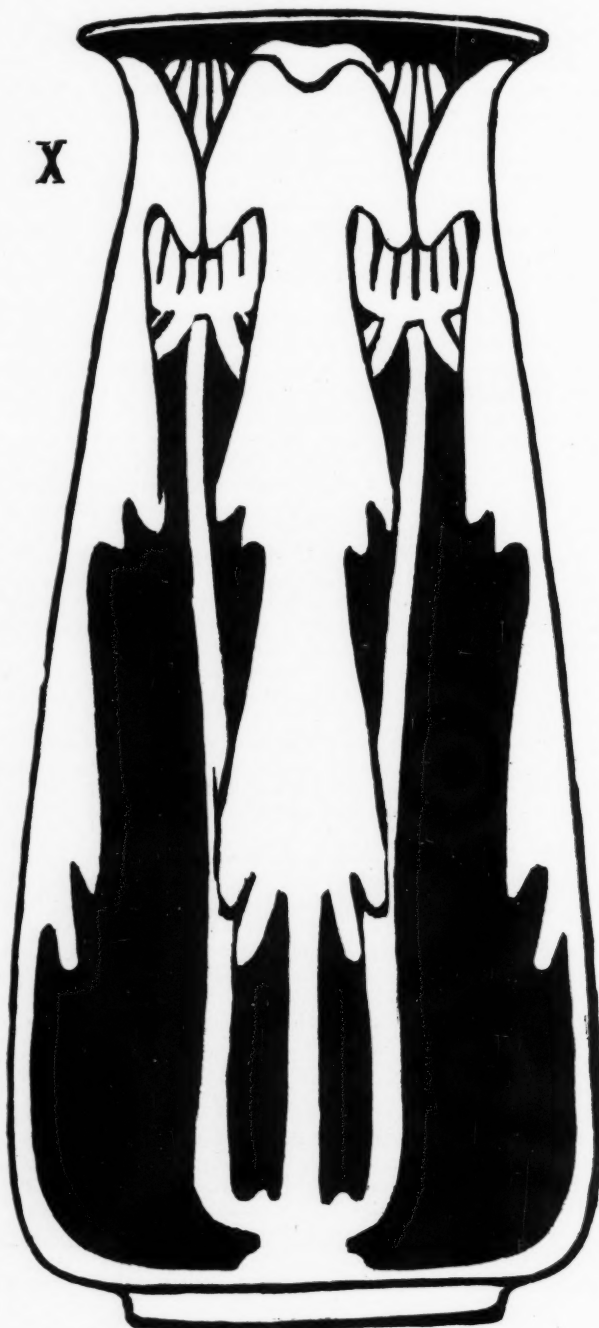
Third cup or saucer—Employ some historic style as in Fig. IX, Gothic.

Problem III. Plan some vase form. Let its general structure be vertical like Fig. X, viz: the long vertical lines ought to overbalance the short curves and horizontal lines so as to produce tallness. A reversal of this arrangement gives the effect of the low flat vase form.

In the decoration use the conventionalized or realistic flower forms but in both cases only the decorative elements of the plant are to be considered. Avoid picture painting. Repeat the lines of the vase with some variation in the design. Always set up a relation of this kind between the structural and the design elements. Paint in either the design or the background in black and white or two tones of blue.

Do not forget the lesson side, which is to strengthen the judgment in determining just how much light and dark is to be used and the harmony of the edges of areas. Every area must be beautiful in itself and its beauty must be in keeping with that of its neighbors.

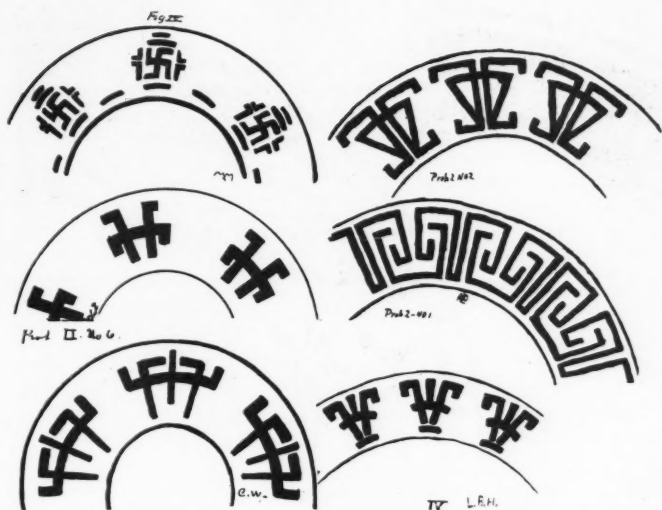
X



#### THE CLASS ROOM

All subscribers wishing to follow the course of lessons on design by Mr. Froehlich, may submit their best three solutions of each problem to this depart-





ment. They will be criticised in the magazine so as to afford the mutual help or class room criticism. The work of one lesson will be criticised in the following number of KERAMIC STUDIO. We can not return work sent for criticism.

After working out solutions and marking them from 1 to 6 in order of merit not of making, select the best three of each problem and make copies, using brush and India ink, studying to make a good firm line—also draw in India ink all other parts of the lesson to be submitted to KERAMIC STUDIO for criticism. Sign everything with initials but slip must be enclosed with name and address in envelope. Work must reach KERAMIC STUDIO before 8th of month or no criticism will be given. Keep originals of work sent, to refer to in case it is not put on the "black-board" of the Class-Room.

The Class Room criticisms will be made by the Editor on lines laid down by Mr. Froehlich.

A. L. D.—Problem I. These solutions have the effect of not having been sufficiently considered, especially the background shapes. The shapes of background spaces should be such that if the color scheme should be reversed the design would be fully as good, also it should be considered in a tile that when four tiles are placed together the background space where the four corners come together should be quite as fine in shape as the design proper. The design should occupy the corners sufficiently to give a finished effect.

Prob. II. Border designs. Figs. 1, 2 and 16 are interesting, the opposite movement of the small squares in Fig. 1 is somewhat distracting, acute angle in Fig. 1 should be relieved by cutting off the corners. In Fig. 2 the line should be wider. The spacing is better in Fig. 1 than in Fig. 2.

E. P. H. Problem I. Sol. 1 and 2 very good in dark and light and invention, No. 1 needs a heavier line around the tile to hold the heavy central form, a dark square between the two turned in ends would help the design. 3 and 4 have too much dark and the thought is common-place.

Prob. II.—Borders. Figs. 4 and 15 are excellent. The other border is weak and not well thought out, neither is the plate border which has little interest.

Prob. III. None of the solutions are good in division or areas, of dark and light, the design is placed too much in one spot, the center of the rectangle.

C. W.—Problem I. These solutions are good in the distribution of dark and light but defective in invention, your last lesson's work was much more imaginative.

Prob. II. Borders 20 and 26 are also good in distribution of dark and light and in spacing, 25 needs a little wider spacing. Plate border design is too wide for plate but is well spaced, the center line of ornament is a little too narrow.

Prob. III. Solutions are good in massing of dark and light but drawing is not interestingly made. The double line about flowers is not appropriate for a naturalistic arrangement.

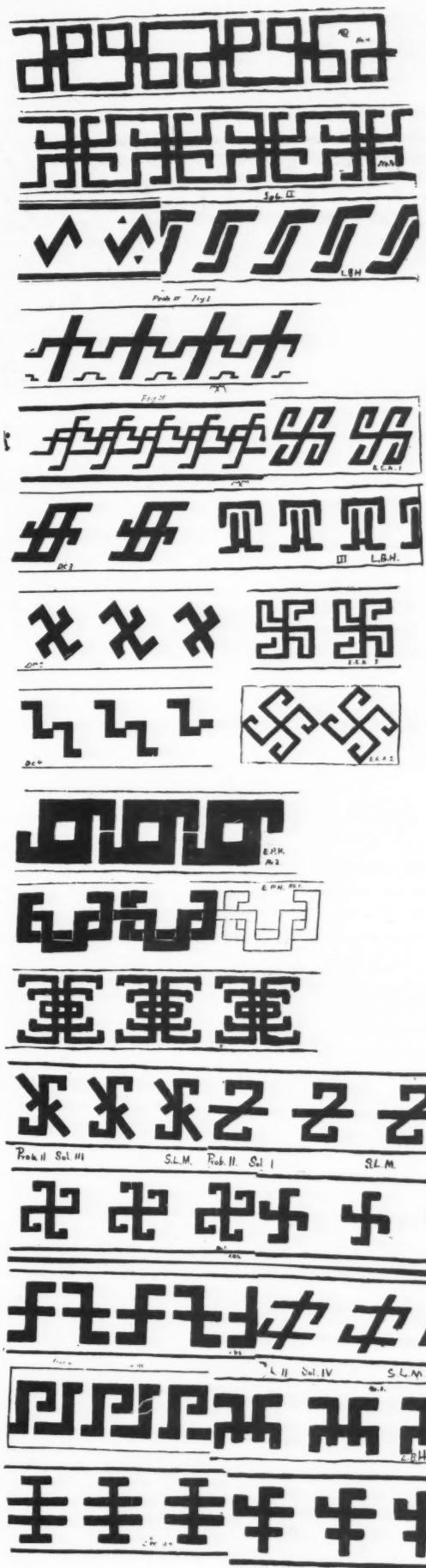
H. B.—Problem I. Tile good as far as it goes, too much light space, needs something to break up large surrounding space.

Prob. II. Fig. 3. This is a fine border in every way—good especially for basketry.

Prob. III. Sol. 1. Too much dark area. Sol. 2. Cuts the area into two diagonal masses of dark and light—it is not a composition.

M. M.—Prob. I. Sol. 1. Good. The proportion of black might be a little greater; your second solution is good in proportions of black and white but invention not so good, the third has too much movement, not enough dark to balance light and the acute angles at corners unpleasant, these should be cut off; too many forms used.

Prob. II. Plate border is well spaced and interesting. The other plate



border is not good in invention. Border No. 5 is best in dark and light, but small form below not heavy enough to hold the design together. No. 6 is interesting; too intricate, it would be better if the line were about twice as heavy.

Prob. III. Both solutions are good every way. The Hollyhock is especially fine.

E. C. A.—Problem I. Solutions all good—judgment correct as to comparative merit of designs.

Prob. II. Fig. 7, 11, 13 all good in design and spacing, proportion of dark should be slightly increased by widening the line. No. 11 is best; 13 would be improved with a small dark form in triangular space. Plate design not

good; too much motion, too large and not well spaced.

Prob. III. Solutions are all too spotty and proportion of dark too great.

L. B. H.—Prob. I. Solutions all cut up into too small areas like a checker board, impossible to take in the idea intended at a glance.

Prob. II. Borders. Figs. 4, 9 and 24 are good in every way. Plate border a little heavy for plate ornament, would be better if base was not quite so much narrower than top.

Prob. III. Solutions are not well understood, they are not compositions in any sense.

D. C.—Prob. I. Solutions 3 and 4 are good in dark and light. In No. 4 the whirling motion is unpleasant as it is not appropriate for a square, the



Prob. III. No. 1



Fig. 1 M.C.

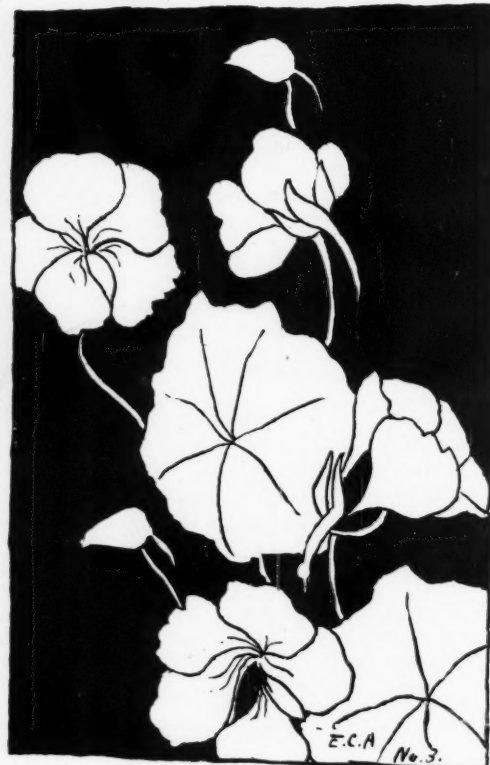


Prob. III Sol. 1 S.L.M.



Prob. III Sol. III

S.L.M.



E.C.A. No. 3



balance of dark and light is not so good in the other solutions, neither is invention.

Prob. II. Borders 8, 10 and 12 are good in every way. Plate border ornament too large for plate but well spaced.

Prob. III. Solutions are all too spotty; too many small and similar forms, design looks thin and scattered.

S. L. M.—Prob. I. Solutions all good in distribution of dark and light. Solution 1 would be improved by a square in the corners. Other solutions are not so good in invention.

Prob. II. Borders. Figs. 17, 18, and 22 are good in dark and light but diagonal movement too pronounced; the cross bar gives an unpleasant feeling. Plate border has too many bars going in different directions.

Prob. III. Are all interesting and good in dark and light. Solution 1 is especially good.

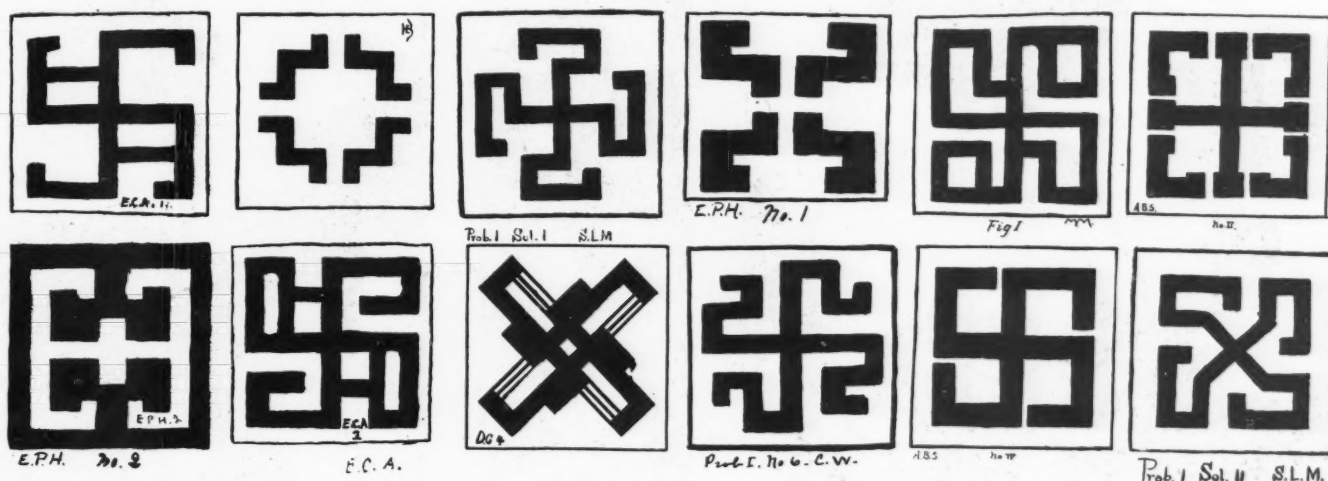
Sol. 3 would be better if leaf did not cross flower at such a pronounced angle.

A. B. S.—Prob. I. The proportion of black and white in these solutions is very good, they are a little lacking in invention. In No. 1 the effect is too spotty and unfinished, there seems to be no continuity, nothing to hold the design together. In No. 3 the black is centered too much it should fill space more fully.

Prob. II. The plate border has too diagonal a movement, leaving an impression of unrest, the connecting lines are too slight to hold the design.

The borders—Figs. 19, 21 and 23 are good in balance of dark and light, and much better in invention than the tiles.

Prob. III. These solutions are all good in dark and light arrangement and your judgment in regard to order of excellence is correct. In No 2 the lines leading out of the rectangle are too marked. In 3 and 4 the round leaf in the corner is spotty in effect, it should be cut by the rectangle.



### SUMMER SCHOOLS

The summer schools are all in full swing now and well attended, it is worthy of note that in every case, one or more of the crafts has been added to the regular work. The demand for knowledge of the useful and beautiful is growing apace, a manual training in some art or craft is beginning to be felt universally as a necessity in a sane and healthy education; when our growing generation of young people have been trained in this atmosphere we may look for some remarkable results and a sweeter, healthier atmosphere in our homes and abroad. At least, they will create such a demand for good art and decoration that our homes and shops will no longer be flooded with the atrocities of bad taste seen everywhere now. The hope of art for the future is the education of the growing generation beginning in the kindergarten.

Try and live by the advice of Wm. Morris, who says: "Have nothing in your homes or about you that you do not know to be useful or believe to be beautiful."

### NATIONAL LEAGUE OF MINERAL PAINTERS

THE League reports that application for space in the St. Louis Exposition has been made, and the promise received that it shall have careful consideration.

From Augusta, Maine, comes the word that the club enjoyed the League exhibition, and intends to plan for the one next year.

The Providence Ceramic Club held its Annual meeting on June 4. The following officers were elected: Pres. Miss Emily Hall; Vice-Pres. Mrs. LaFayette Rogers; Sec. Miss Susan R. Rawson; Treas. Miss Emily H. Crouch; Following the business meeting was the annual supper, at which time the yearly exchange of plates occurred. The plates are of uniform size and

shape, the same being used each year, and decorated by the members. This "Annual Swap" is a most interesting feature and the members hope to continue it indefinitely.

The Providence Club made every effort to make the League Exhibition a success, and had a very large attendance.

The vases they thought did not show as good work as those of last year, but the plates were very interesting, and the bowls they were very much pleased with, both in shape and decoration.

We had hoped to present something from all the clubs which have received the exhibition but up to this writing, only two have been heard from. Let this be a gentle reminder to the delinquents that we should all like to know the impression that is being made.

I. A. JOHNSON,  
President.

### Outline for Study Course for the National League of Mineral Painters for 1903-1904

#### COMPARATIVE.

Jar, No. 505, Ceramic Art Co.  
Pitcher, selected from League competition of last year.  
9½ or 10-inch plate, either rim or coupe.

#### EDUCATIONAL.

Outline for cup and saucer.  
Jar, with or without cover; to be modeled, thrown or cast, with or without glaze.  
Design for 8-inch Tile, in black and white, water color, or the tile itself.

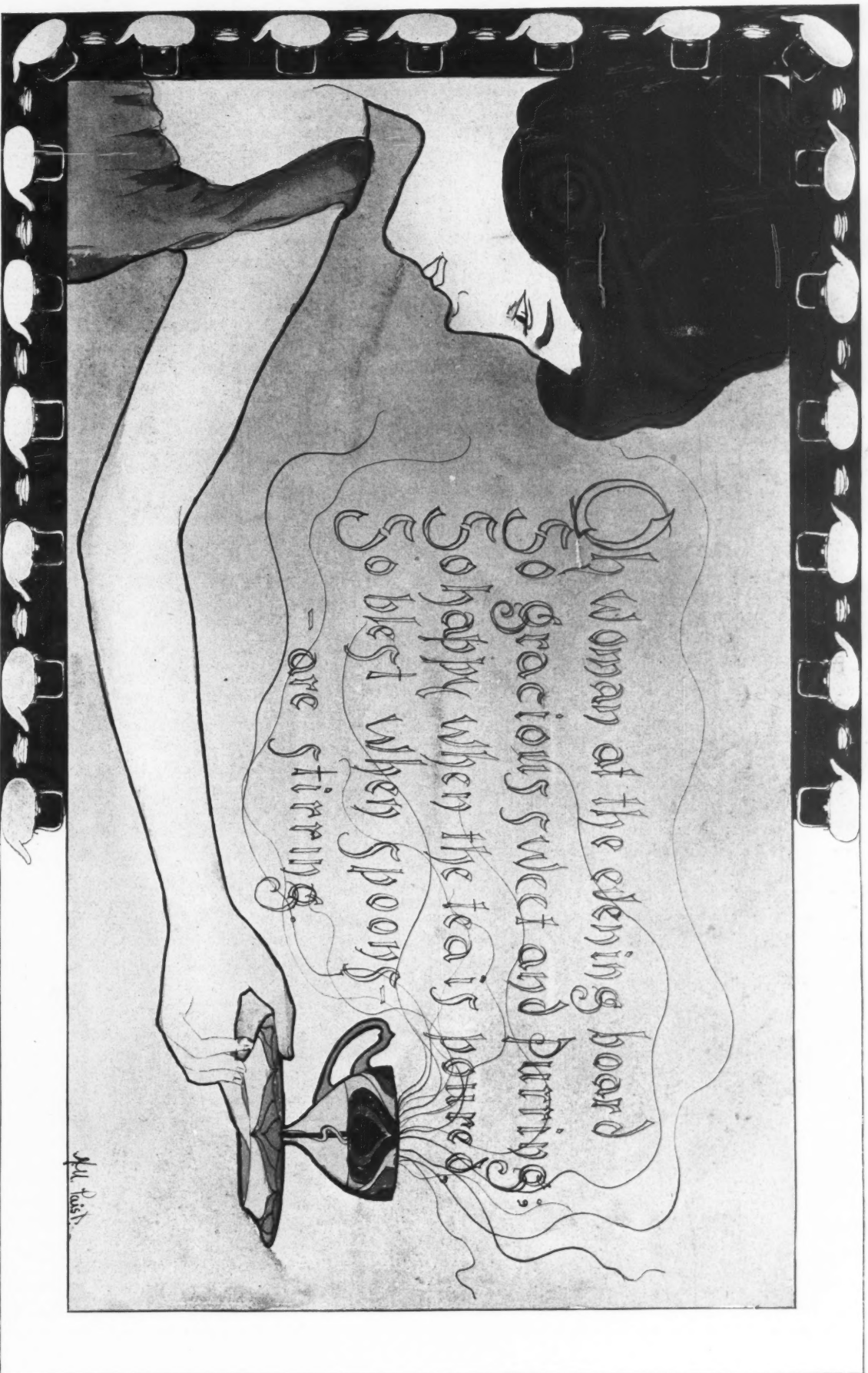
MARY CHASE PERRY,  
Chairman Educational Com.



DESIGN FOR BOWL OR PLAQUE—LUCIA A. SOULE

To be carried out in two shades of blue grey on white or two shades of grey green on cream ground.





# THE CRAFTS

WOOD CARVING AND PYROGRAPHY. LEATHER AND METAL. BASKETRY, ETC.

*Under the management of Miss Emily Peacock, 163 South Ninth street, Brooklyn, N. Y. All inquiries in regard to the various Crafts are to be sent to the above address, but will be answered in the magazine under this head.*

## SIMPLE FURNITURE

### ITS STRUCTURE IN RELATION TO USE AND BEAUTY

(Second Paper)

*Elisabeth Saugstad*



lines, the greater will be his success, both usefully and artistically.

I need touch here only on those woods which from their general availability and characteristics are best adapted to the style of furniture under consideration. Of these the oak, "Sole king of forests all," as Spencer calls it, comes easily first, it is so strong, durable and beautiful, quite fine enough for princely halls and noble dining rooms, but lending itself with equal appropriateness to the simplest effects. But it must always be treated with breadth, dignity and directness.

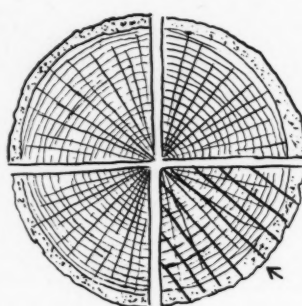
It cannot be surpassed for furniture for the hall, library, dining and living rooms. It is one of the easiest woods to procure; it is not expensive, nor is it especially difficult to work, though there are degrees of hardness. White oak is the kind most commonly used and it comes in all dimensions, either plain or quartered. Quartered oak, with its beautiful markings, is not, as some suppose, a different kind, but any oak cut as nearly as possible in the plane of the silver grain or medullary rays. These radiate from the center and the diagram, III. I, shows the manner of cutting to get the greatest amount of figured wood with the least waste.

Ash is a very useful and satisfactory wood for the beginner. It is lighter in weight and easier to work than oak, but it is strong and durable. It has an open, flowing grain, boldly marked in a strong, free way, and it demands broad and simple treatment. For the piazza, the "den" and the summer cottage

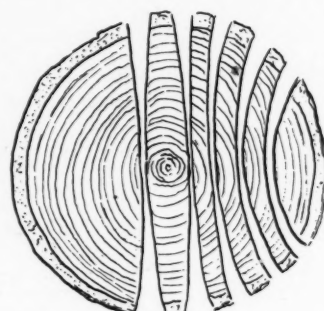
where furniture of the simplest kind, strong, yet not heavy, is desirable, it is better than oak. It is cheaper, also, and easy to get in most places.

Mahogany is a very beautiful wood which may be used for very simple furniture, if the simplicity be that of refinement and artistic reserve, and the workmanship perfect. Its fine texture and rich deep orange and wine tones, undershot with subtle golden lights, would make anything primitive or crude in treatment seem as incongruous as a silken brocade used as a working gown.

The finest and best comes from the West Indies and is called Spanish and Cuban, but is is very heavy and hard to



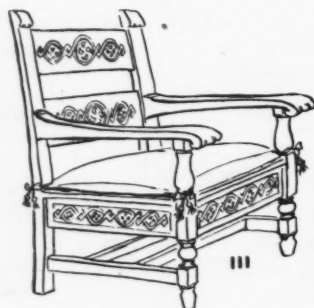
I  
How oak is quartered.



II  
Showing the action of wood in shrinking.

work. The highly figured kinds are always used as veneers. The kinds most used in cabinet work are Mexican and Honduras. These are not as heavy and dark as the West Indian, but are quite heavy enough for strength and durability, and are among the most agreeable woods to work, being clean and free from knots. It is not as expensive as many suppose, and it is sometimes possible to get boards in short lengths at little more than the price of quartered oak.

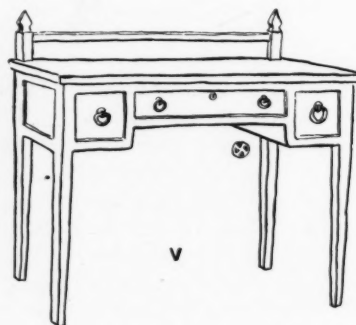
Walnut, at one time so indiscriminately used and abused, is really a beautiful wood when it is well treated, being strong and fine grained, and makes furniture of sober richness and dignity, particularly suited to dining rooms and libraries of that character.



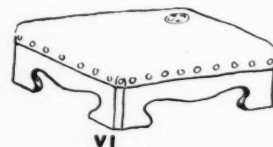
III  
A design best developed in oak or walnut. It may be quite plain or carved simply.



IV  
A design suited to ash or plain oak.



V  
A design particularly suited to mahogany. Brass fittings.



VI  
A design which may be used for any wood from pine to mahogany, with any sort of stout covering, from denim to Spanish leather.



It should have broad, but conservative treatment, and any thing primitive in design or construction, is as little pleasing as in mahogany, though it is suited to a heavier, simpler style than the latter. It is a wood which looks very well carved, not, however, the bulbous kind which was so much used on it, and which not only looks but usually is stuck on. Its use on any kind of furniture shows lack not only of good taste, but good sense. Walnut is now rather scarce and costs as much as good mahogany, but we have always been able to get it in small quantities.

These are the four woods Mr. Saugstad and I use most often and like best, and they have a wide range of applications; but there are of course many others that the craftsman may use, as red and white birch, maple, (not the birdseye, which is always a veneer), cherry, sycamore, hard pine and whitewood. The two last, stained or painted, make excellent light weight furniture for the porch and summer cottage, and are cheap and available almost anywhere. They cut clean and are easy to work, so they are very good woods for the beginner to try his "prentice hand" on.

But though these woods vary so much in their color, grain and uses, there are, as I have said, certain things which they have in common, to a greater or lesser degree. The most trying of these properties is shrinkage and expansion as the moisture in the wood is dried out or as it absorbs more from the

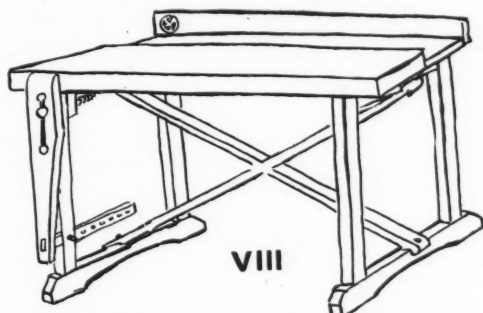
The longer it can be kept at about the temperature to which it is likely to be subjected, the better.

Over drying at a high temperature makes it more apt to absorb moisture. Too rapid drying is likely to cause it to split at the ends, where the pores being more open the drying is, consequently, quicker. This can be prevented by painting or shellacking the ends, which is a wise precaution in any case.

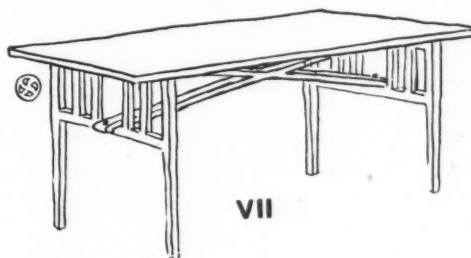
The principle which wood follows in drying is shrinking along the line of the circumference, as the heartwood is closer fibred and more solid than the sapwood. The diagram, Ill. 2, explains the action and it is well to fix the principle firmly in mind, and remember that the heart side of boards will dry convex and the sap side concave.

In buying wood the best way is to go to a reputable dealer, tell him just what kind of wood is wanted, for what purpose and trust to his judgment and honesty; for it requires long experience to choose lumber in its rough, begrimed state in a yard. Confidence, courtesy and interest in the subject will, nine times out of ten, not only insure a much better selection than the amateur is able to make for himself, but will often draw out much information of value.

It was a distinct shock and disappointment to me when I had to give up my cherished illusion, shared by most beginners, that with wits and patience to guide them, the old family saw and plane, rusting in the woodshed, were the only equipment



Well braced and convenient work bench of pine, with the 2 in. top preferably of oak or maple. Wooden vise, which is less expensive, but not as rigid, durable and quick acting as one of iron. Bits of rubber under feet to keep from slipping.



Low sewing or work table, best made of some light weight wood, as pine or white wood.

atmosphere. The first causes splitting, unsightly cracks and warping, and the second is what makes doors and drawers stick and panels split and bulge and open the joints in the frame work when the weather is damp.

It is impossible to be too positive on the necessity of well seasoned wood, and if the craftsman can only be convinced of that before it is borne in upon him by hard experience, it will save him much discouragement and mortification.

The lumber man will probably say that the wood is well seasoned, but what will do for ordinary building purposes will not do for furniture.

If there is an available dry kiln it is well to rough out the wood to the general dimensions of the piece contemplated and put it in for from one to three weeks at a temperature of from 80 to 100°. If this is not possible, as is often the case, the next best thing is to put the pieces on the cross rafters in the attic, if it is summer, make a draught through, if possible, and leave them there for not less than a month or six weeks. In the winter they can be put on a rack over, or near, the furnace or stove, being careful, of course, that they are not so near as to be in danger of charring or catching fire.

This seems a great deal of trouble, perhaps, but it is a short and easy cut compared to the way the old Mission Fathers turned and seasoned their wood for years. It is not as good a way, but it is the best we can do under most circumstances.

necessary to the determined and enthusiastic craftsman. Good tools, well kept, are necessary for good work. It is very poor economy to get an inferior grade.

It would be impossible to give an exact list of necessary tools without knowing the extent of each craftsman's ambition; but with those in the following list it is possible to construct any piece of furniture illustrated in these articles. The cost will be between \$10 and \$15:

Cross cut, Rip and Back saws; Jack and Block planes, necessary; Smooth and Fore planes, desirable; 5 Chisels, from  $\frac{1}{4}$  to  $1\frac{1}{2}$  inch; Brace and 3 bits from  $\frac{1}{4}$  to  $\frac{1}{2}$  inch; Mallet; Hammer; Ruler; Try-square; Bevel; Marking gauge; Gimlet; Compass and Brad awl, useful; a Plow is necessary in panelled work; Clamps.

(TO BE CONTINUED)

#### EXHIBIT AT PRATT INSTITUTE

THE annual exhibition of the students' work at Pratt Institute, Brooklyn, took place the 5th, 6th and 7th of June. It was well attended and the work was the best that has ever been shown.

The Art Metal room was quite a point of interest and many good examples of metal chasing, engraving and enamelling were exhibited.

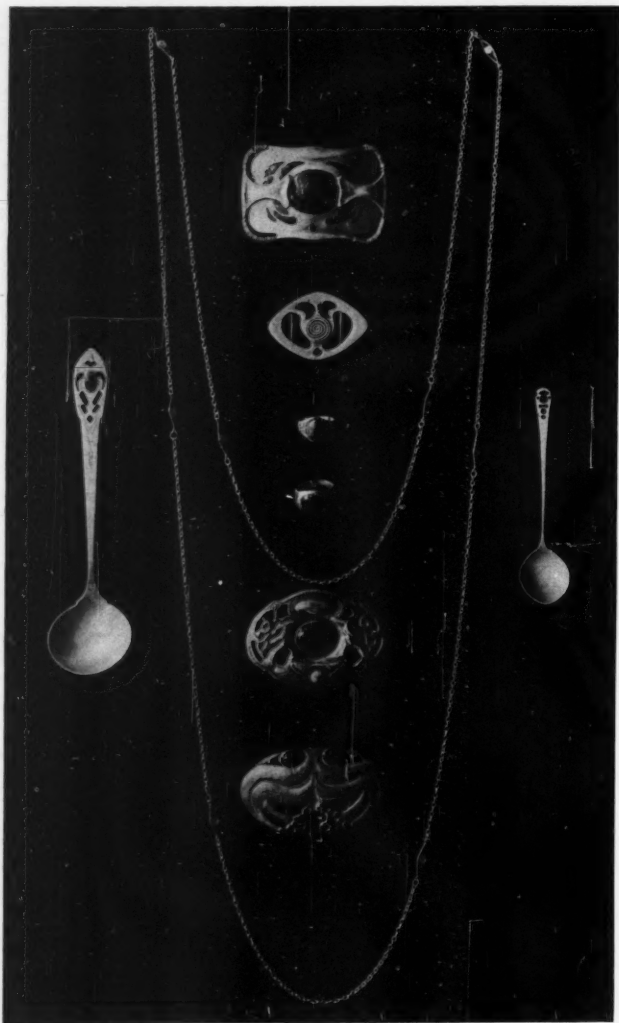
Enamelling on metal has only been taken up by the class

since January, and the students have been experimenting for themselves with great success.

Mrs. Hugo Froehlich exhibited a dainty silver chain with the links enamelled, some silver buckles and very chaste spoons. The handle of the large one was pierced and set with a Mexican opal; the smaller enamelled in transparent enamel.

Mrs. Helen Ward showed some silver photo frames of clever workmanship and very beautifully finished. She also had an exquisite brooch of enamelled gold set in a frame of twisted wire.

Of the several necklaces with pendants made by Miss E. P. Day the gold set with amethysts and pearls was the most admired; she also had two cleverly wrought gold and silver rings.



Mrs. H. Froehlich.

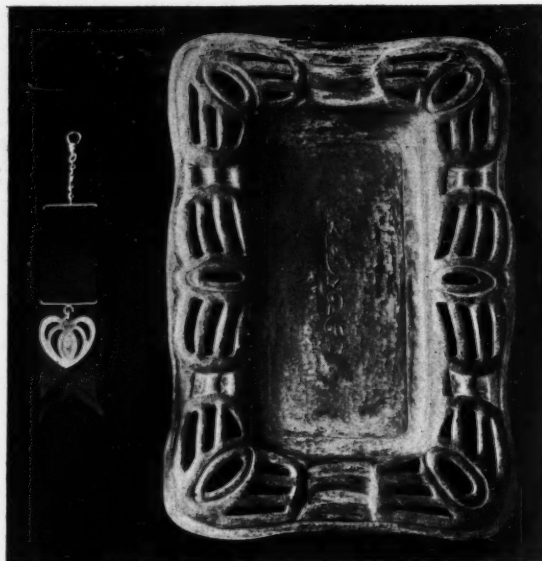
Mrs. K. Wright showed an interesting copper tray with design in open work, and a silver and enamel fob, which was pierced and very pleasing.

Miss Pearson's silver clock clasp was unique. It was made of coiled wire with silver backing and set with unpolished brown stones. Her long chains with enamelled links and the enamelled pendant and chain showed skill and fine finish.

Miss E. Vail showed some hand made spoons of old design, reminding us of our grandmother's time; and an oxidized silver necklace and pendant set with malachite, all very pleasing.

Miss Lambert had a pierced silver bowl which was very much appreciated.

Mr. R. Moulton's gravy dish and spoon were very harmon-

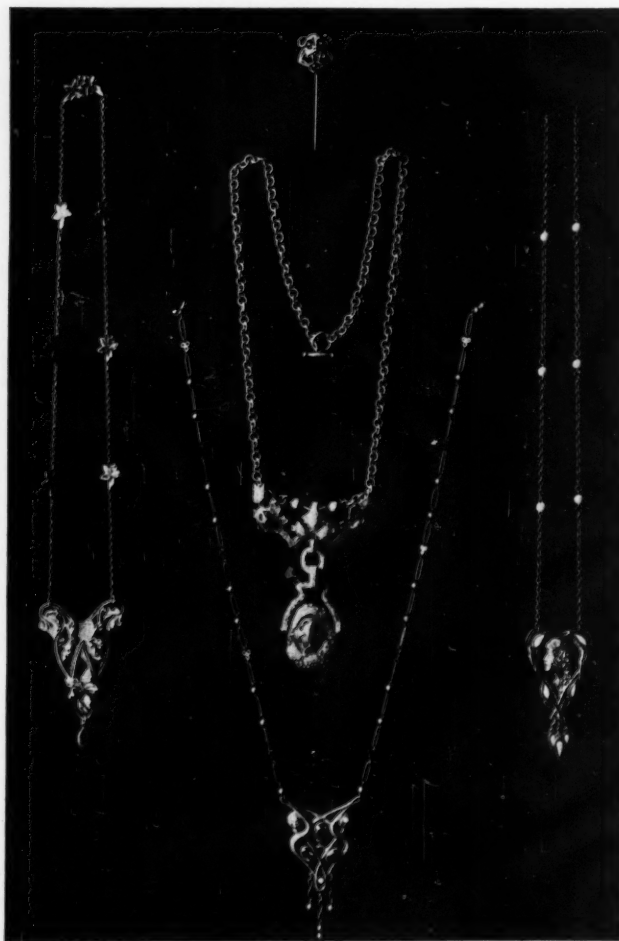


Mrs. K. Wright.

ious in design, and showed artistic feeling.

Miss Peacock's exhibit consisted of a belt pin in the form of a scarab in green and blue enamel on silver; some quaint silver pins set with Mexican opals, a low silver dish repoussé in simple design and a pierced silver tea strainer.

Mr. H. Kuss had an interesting and instructive exhibit of the process of dye setting.



Middle Pendant by Miss E. Vail, the others by Miss E. P. Day.



## PYROGRAPHY TREATMENT FOR TRAY (Page 93)

Katherine Livermore

THE lettering should be done with the finest etching point in the daintiest manner possible, also the lines of steam which emanate from the cup.

Use an ordinary curved point for the rest of the work; making the hair in bold strong lines very close together to make a solid mass; the gown should be shaded with the flat side of the point, keeping it in a medium tone. In working up any design always strive to obtain three tones,—dark, medium, light. Carry this same idea out in the border, making the background dark, leave in the kettles the natural wood and shade the cups very delicately in the finest lines with the etching point.

## ANSWERS TO INQUIRIES

A. L. F.—Asphaltum varnish comes in tubes and cans of all sizes. It can be bought of any paint shop.

M. P.—Probably you bought C. sulphuric acid, which means commercial and is not right. Always ask for C. P., this refers to all acids, and means chemical pure.

R. T.—Sphinx paste is better than any other for leather work. It can be bought at the Arabol Co., William St., New York.

H. P.—Devoo's oil malachite green will give a delightful finish to the wood part of your scone. Rub in a very little at a time until you get the desired effect.

To finish wood in the natural state, take half spirits of turpentine and half beeswax by weight. Put these together in a can and melt by putting the can in another one holding water. Keep water boiling, and stir the mixture constantly, until it is thoroughly blended, and of the consistency of thick cream.

## CLUB NOTE

The annual meeting of the Detroit Ceramic Art Club was held April 24th in Miss Mary MacMaster's studio, Whitney Block, the following officers being elected: President, Miss Mary MacMaster; first Vice-President, Mrs. Caroline T. Owen; second Vice-president, Miss Goodall; Recording Secretary, Miss Miriam Candler; Corresponding Secretary, Miss Edna Hibbard; Treasurer, Miss Ida Parkinson. Miss Donaldson, Miss Goodall, and Miss White were made members of the Advisory Board.

C. EDNA HIBBARD, Cor. Secretary.

## ANSWERS TO CORRESPONDENTS

*This column is only for subscribers whose names appear upon our list. Please do not send stamped envelopes for reply. The editors can answer questions only in this column.*

*All questions to be answered in the Magazine must be received before the 10th day of the month preceding issue.*

E. C.—We have never heard of outlining in black paste—we think you must mean black paint, which is the regular method of outlining. To do this, use German outlining black in powder, mix to the consistency of tube colors with a medium composed of 6 drops copaiba to one of oil of cloves, thin with rectified spirits of turpentine so that the color will flow easily from the brush but thick enough to make a good black line. When dry, go over line again to be sure it is black enough. If you wish a raised black line add 1-5 Dresden Aufsetzweis in tubes and work the same way as paste for raised gold, be sure and make the line of even width and blackness. You may see examples of the flat outlining in every studio.

D. M. A.—The best medium to use with powder colors to keep them open until painting is finished and colors well blended, is a mixture of one drop of oil of cloves to six of copaiba. With tube colors, oil of lavender or oil of cloves can be used to keep the color open.

C. S.—Mix your powder color to the consistency of tube colors with the medium given for D. M. A., thin with rectified spirits of turpentine, not as thin as for painting if a dark color is required, and use the rubber stamp as on an ink pad, first smoothing the color on the palette so that the stamp will not sink too deeply. For tube colors or gold add turpentine only.

Mrs. W. W. S.—The iron colors, deep red brown and carnation especially, have an unreliable way of firing, often one tube of color will rub off while another will fire well. We should use 1-3 flux and no ivory yellow and fire reasonably hard. If it continues to rub off, throw away the tube and try another; ivory or any yellow added to iron reds is liable to destroy the red unless very judiciously used, a very small quantity is generally sufficient.

W. T.—The best tinting can be made by using 1-3 as much flux as color, adding as much fat oil of turpentine as color and flux combined, thin with oil

of turpentine until it is no longer "tacky." We do not care for any ready prepared tinting oils. The preparation of grounding oil is a secret of the manufacturers, also the oils used in the preparation of the Dresden tube colors. For tinting, in case you use powder colors, mix them first with medium six drops of copaiba to one of clove oil to the consistency of tube colors, then use the fat oil and lavender.

G. S. A.—We do not know of any better medium than the one of which we gave you the formula. If you wish to compose a medium of any or all the ingredients you mention you might experiment until you find the composition you wish. The fat oil and copaiba are used to hold the colors together so that they will not be grainy, it is not usual to have both in the same mixture, the copaiba perhaps keeps open a little longer and is not quite so smooth as the fat oil. Oil of tar keeps open longer still and has only a little of the quality of keeping color smooth. Oil of lavender is added to keep color open only and oil of cloves keeps color open longer still, usually only one of each kind of oil is used in combination, that is, fat oil and lavender, or copaiba and cloves. Sometimes oil of tar is added to these combinations. You can easily experiment with a few drops until you get the desired proportion. This medium is for use in mixing powder colors for either painting or tinting—for grounding, we imagine some heavier drying oil is used.

E. W. A.—Gold lustre is used just as it comes from the vial with a large square shader, if thick enough to be sticky, thin with a little oil of lavender. This applies to all lustre. Gold lustre is garish if used alone, it should be fired first, then the "covering" used over it, which gives a rich ruby effect. If the lustre rubs off, it has not been sufficiently fired, color can be used over lustre, lustre will always come off if used over pencil or India ink, it needs to touch the china. Color and lustre can be used on the same piece and fired together; color which comes out dull after firing is either insufficiently fired or  $\frac{1}{4}$  flux should be added. We judge that the trouble is insufficient firing as lustre also rubs off. Vellum is used on china the same as a dusted or grounded color; the surface is covered with grounding oil, and after padding evenly the vellum is dusted on with a brush, being careful to keep the oil away from the oil. Keep putting on more vellum until the oily surface looks dry with color. This applies to all mat or powder color grounds.

When red comes out with a blue tone it is either fired too hard or has too much flux or oil. Belleek is better fired alone as it does not need as hard a fire as French china but can be fired in the top of a gas kiln or the front of an oil kiln with French china in the other part, as no kiln fires as hot near the opening. If you wish to import china direct from France instead of paying the two dealers, why not write direct to C. H. Haviland or Haviland & Co., Limoges, France; if they will not deal directly with you they way direct you to some French retail dealer, or write to Pouyat or Tressemains & Vogt. See advs, in K. S., they may direct you where to send.

Black outlines can be put on with either a fine brush or a pen for India ink, in the latter case, after mixing to a proper consistency, put the color in a little cup so that the pen can fill easily. We give fruit designs from time to time in K. S., but will soon be publishing a book of fruit designs both conventional and naturalistic, similar to the Book of Roses just being issued.

N. H.—In executing the nasturtium design for bowl by Adelaide Alsop-Robineau in June 1902 K. S., the space above the design would be too garish if filled with solid gold, but a gold tracery such as is suggested would not be too heavy. A tinting inside of yellow brown lustre finished with an edge and bands of gold would be appropriate. Use a band about  $\frac{1}{4}$  inch wide, about 1-8 inch from edge, 1-8 inch below the band finish with a line of gold. If you prefer you may fill in the space above design with a tracery in color, Albert yellow or yellow brown or carnation, or a gray green according to effect desired, let the bands of gold follow the irregular edge. We hardly think a solid tint would look well in so large a space as there is on your bowl above the design. Finish the outside edge with a band of color instead of gold if you use color tracery. The violet vases should be tinted either in color or lustre, but we do not advise a violet tint as that would not show off the flowers to the best advantage. The violets of gold are rather too pink in tone; if you use them, add Blanding or Royal blue.

F. P. C.—You will find treatment in flat color for simple decoration of plate designs in every number. The fish set has already been given as requested. Five different designs have been printed to give a choice, look over your back numbers from August to December 1902. To put on flat color, use a large square shader, mix your color (if in powder) with medium until of the consistency of tube color, then use rectified spirits of turpentine to thin until it will flow easily from the brush. If you use tube colors it will produce better results to thin the color as it comes from the tube, with oil of lavender. Lay on as evenly as possible so that brush strokes will not show but let a variation of tone appear, the color flowing heavier in some places than in others. The gold that is put up for photographic purposes would not be so good for use on china, unless you used it as you would a color for grounds. Gold in powder form to be used on china must be a soft red brown color and can only be obtained by precipitating the gold as in directions given. To make the flux, use sub-nitrate of Bismuth in powder form, which can be bought at any drug store.

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